

# NOAA REPORT



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## GOES-8 Weather Satellite Completes

**Testing:** The Nation's first in a series of five advanced weather satellites, GOES-8, has successfully completed basic engineering testing and is now beginning to provide more precise data for improved forecasting. NASA turned the satellite over to NOAA on Oct. 26 for operation.

Geostationary Operational Environmental Satellites (GOES) are a mainstay of weather forecasting; their images of clouds over the Earth are well-known to viewers who watch nightly weather forecasts on television.

**Fishermen Charged in Fishing Gear Damage Fraud:** Two South Boston lobster fishermen have been charged with 23

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counts of mail fraud, conspiracy and making false statements in attempting to defraud the Federal government of almost \$78,000 by filing phony claims for lost or damaged fishing gear.

NMFS is accusing the two fishermen of making a series of claims over the past seven years in which they sought, and in most cases obtained, compensation for fishing gear they alleged was lost or damaged. Under the Federal government's Fishing Vessel and Gear Damage Compensation Fund, fishermen are eligible for compensation under certain conditions if their gear or vessels are lost or damaged in Federal waters. If convicted, they could face maximum penalties of five years in prison and \$250,000 in fines for each count.

**Foreign Poachers Fined, to be Tracked by Satellite:** A South Korean fishing company recently caught poaching fish from U.S. waters in the Western Pacific has settled in U.S. court for a \$1 million fine,

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PHOTO COURTESY JEFF FORMBY

*The Palm Sunday tornado when it was within a half-mile radius of the Goshen United Methodist Church in Piedmont, Ala. Jeff Formby snapped the picture as he, his grandfather, and other mobile home residents were descending into an underground shelter they had built.*

## Palm Sunday Tornado Report

# Timely Radar Warnings Failed to Get to Public

**T**he NOAA Weather Radio network should be strengthened and expanded to help prevent loss of lives and property from such natural disasters as tornadoes, according to the report by a disaster survey team that investigated the Palm Sunday tornadoes in which more than 40 people died in three southeastern states last March.

The 73-page report, *Southeastern United States Palm Sunday Tornado Outbreak of March 27, 1994*, was prepared by a NOAA disaster survey team following on-site assessments and interviews. The report is part of NOAA's on-going program to evaluate the performance of its people, its technology, and the entire process followed in warning the public of severe weather.

"Doppler weather radars proved their value even though they were physically more than 100 miles away from the Palm Sunday storms," said Elbert W. Friday Jr., director of the National Weather Service. "We're making good progress in improving warnings. Now we need to strengthen the NOAA Weather Radio network and other communications channels so we can get the warnings out to the people who need it."

Twenty people died and 90 were injured when a tornado collapsed the roof of the Goshen United Methodist Church near Piedmont, Ala., as the congregation celebrated Palm Sunday services. The report noted that despite a

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*It's Back...*

# El Niño Returns to Tropical Pacific Ocean

**R**ecent atmospheric and oceanic trends indicate the El Niño phenomenon associated with abnormally warm water episodes is developing in the tropical Pacific.

NOAA observers now see climate conditions similar to those in September 1991 and September 1992—conditions were followed by an El Niño-Southern Oscillation (ENSO) during both early 1992 and early 1993.

During ENSO, sea surface temperatures rise at many locations in the eastern tropical and subtropical Pacific Ocean. Also, water temperatures often exceed 30 degrees Celsius (86° F) near

the equator at the International Date Line.

## Getting Into Hot Water

Since early 1990, the surface waters of the tropical Pacific have averaged warmer than normal—a major indicator of El Niño. One of the longest periods of warmer-than-normal conditions recorded during the last 100 years occurred between January 1992 and December 1993. After a brief return to near-normal

conditions in early 1994, the tropical Pacific has grown gradually warmer in many areas.

While NOAA scientists are predicting that abnormally warm ocean surface temperatures in the central equatorial Pacific will continue into early 1995, they cannot predict the exact magnitude of the warmth nor the degree to which certain regions of the world will be affected. NOAA's Climate Analysis Center will continue to closely monitor the developing ENSO.

## Institute to Focus on Arctic Research

NOAA laboratories and the University of Alaska at Fairbanks will collaborate on research in the western Arctic through the new Cooperative Institute for Arctic Research. The Institute's research will focus on the Bering, Chukchi and Beaufort Seas.

The Institute will work closely with NOAA's Pacific Marine Environmental Laboratory (PMEL) in Seattle, other NOAA components, and other Federal and state agencies on fisheries, oceanography, hydrography and sea ice dynamics, atmospheric research, climate dynamics and variability, tsunami research and prediction, and environmental assessment, monitoring and numerical modeling.

"The new Institute will build on a 24-year solid foundation of cooperation, help pool scientific resources of state and Federal government and academia, and further enhance this cost-effective, interdisciplinary approach to research," said Eddie Bernard, PMEL director. "It's a win-win situation for Arctic science to the benefit of all who live and work in the region."

Located alongside the University of Alaska's Center for Global Change in Fairbanks and staffed with Center personnel, the Institute will consist of a director named by the university, an executive board of university and NOAA officials, a scientific and support staff, a

## Palm Sunday Tornado Report Calls for Upgrade of Weather Radio Network

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12-minute advance warning issued by the Birmingham Weather Service Forecast Office, the church did not have NOAA Weather Radio or any other means of receiving the warning.

### Visit by Gore

The tragedy prompted a visit to the area by Vice President Al Gore and an initiative to strengthen the NOAA weather radio network.

Forty-two deaths and over 320 injuries have been attributed directly to the storms, and damage to property has been estimated at \$107 million. Alabama, with 22 fatalities, and Georgia, with 18, sustained the brunt of the storms' effects, though two deaths also occurred in North Carolina. It was the deadliest tornado episode since the Plainfield, Ill., tornadoes that killed 29 people in 1990.

The three weather service offices—Birmingham, Atlanta and Athens, Ga.—serving the hardest hit areas of Alabama and Georgia issued a combined total of 75 tornado warnings and 62 severe thunderstorm warnings during the storm.

### Few Tuned to Radio, TV

The severe storms started early

Sunday morning, when few people are tuned into radio or television broadcasts—the most likely sources of severe weather warnings for most people.

The survey team also found that the timing of the storms complicated the process of mobilizing storm spotters, whose reports provide weather offices with important details about tornado movements. Lacking such reports, the survey team said, the Birmingham and Atlanta forecasters showed "strong reliance on, and confidence in, Doppler Weather Radar as the key warning tool."

The Maxwell Air Force Base WSR-88D Doppler Weather Radar was the main source of warning information for the Birmingham Weather Service Forecast Office. The Atlanta office had access to information from the radars at Maxwell and Robins air force bases. The report noted that both radars provided valuable data even though they were more than 100 miles away from the storms.

### Fixes to Emergency System Also Needed

Among other recommendations, the survey team emphasized the urgent need to implement planned improvements to the Nation's Emergency Broadcast System. The report also recommended that emergency management and law enforcement officials need to be connected to the NOAA Weather Wire Service, which provides instantaneous severe weather alerts and warnings much more

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# Arctic Explorers Rescued by NOAA Technology

**T**hree British explorers owe their lives to the skill and expertise of Russian aviators based in the Arctic, and the Russians' cooperation with NOAA scientists that made the rescue—within a 10,000 square mile area of drifting ice and wind-blown snow—even possible.

When the former Soviet Union opened its Arctic regions to foreigners in 1992, NOAA scientist Russ Schnell, director of the Mauna Loa Observatory, and Tony Hansen of the University of California traveled to northeastern Russia to conduct a plume study deep in the Arctic basin. They enlisted the services of seasoned Russian aviators based in the Siberian town of Cherskiy who had expertise unique to Arctic conditions, laying the groundwork for a good working relationship between western scientists and this Russian source of aviation logistical support.

In the spirit of cooperation, Schnell and Hansen loaned the Russians a Global Positioning System (GPS) receiver. The device uses satellite signals

to determine precise navigational positions. The Russians, used to navigating in extreme conditions by traditional methods, considered it only as a backup. But when they finally resorted to it completely in a last-ditch rescue attempt, that GPS made a life and death difference for three members of a British geographic society expedition attempting to ski across the North Pole, whose Antarctic experience had not prepared them for the harsh Arctic environment.

Half-frozen, unarmed, and stalked by an angry polar bear, the explorers signaled London and Moscow for emergency evacuation. They were carrying a GPS receiver themselves, and provided coordinates of their position.

Commander Babushkin of the

Cherskiy airbase took Moscow's call for help. Because the base had supplied logistical support to Soviet meteorological stations scattered across the Arctic for years, in fewer than 24 hours Babushkin was able to organize the air rescue operation that would search for the men 800 km north of the coast in drifting Arctic pack ice.

Two biplanes and a helicopter carrying extra fuel took off before dawn. The explorers had to be found quickly, before early nightfall and its severe cold. Without direct contact with the expedition, the aviators used coordinates provided by London, estimating location based on a 30-mile-per-day ice drift. They were counting on the British team to display a red parachute for visual assistance.

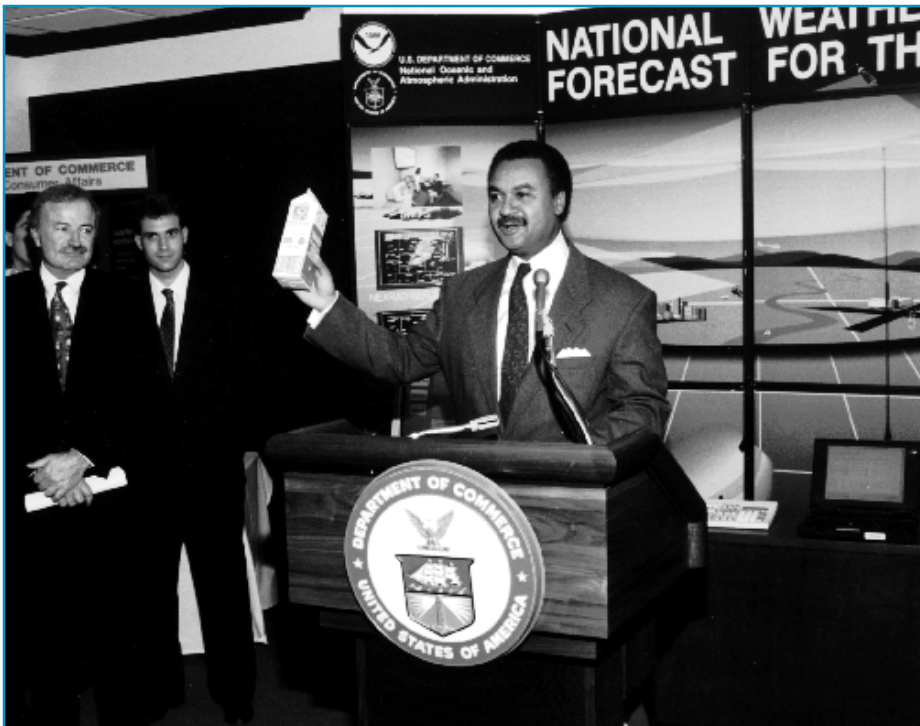
By mid-afternoon the aviators had arrived at the estimated location. Daylight was short. There was no red parachute; the expedition was nowhere in sight.

"We tried to get a radio contact on a short-wave radio," said Russian navigator Vladimir Lukianov. "We didn't get a reply. After the point was passed we decided to follow the GPS directions exactly. At that time it showed us to set the heading 168 degrees with a distance of 2.2 kilometers. Just after it was done we saw white smoke from a burning sleeping bag. The accuracy was excellent."

The Cherskiy aviators would probably have located the expedition using their traditional navigational methods—but their condition would have been precarious. With the short days and the long flying distance, it would have taken too long to ensure the survival of the expedition. The rescue took 18 hours of actual flying time.

"I think it would have taken us at least two days without the GPS," Lukianov said. "We didn't have enough fuel. That's why we tried the GPS and were able to land within 10 feet of them. The men's health was not so good. One man had severe frostbite—his fingers were black. There was a polar bear outside their camp. They wouldn't have

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## Weather Radio Ads Give Brown Udder Delight

Commerce Secretary Ron Brown (at podium) holds a special quart of milk in honor of Commerce's recent Customer Service Day. How special? Giant Food, the largest grocery chain in the Washington, DC area, is placing ads touting the benefits of the NOAA Weather Radio network on the side of its milk cartons—an example of government and private industry working together for the public good. Commerce Deputy Secretary David Barram (far left) looks on, as does NWS's Rob Wagner (in background).



# FOCUS ON

## Jones Awards & NOAA Awards for Excellence in Coastal and Ocean Management

**T**hirteen people and organizations who made a difference in how we treat our coastlines and other precious resources were honored last month by NOAA.

The 1994 Walter B. Jones Memorial Awards and the NOAA Awards for Excellence in Coastal and Ocean Management recognize more than a dozen individuals, organizations and businesses who have made an outstanding contribution to the Nation's beaches, coastal wetlands, and other ocean and coastal resources.

Through the awards program, begun in 1992 by the late Congressman Walter B. Jones (former chairman of the House Committee on Merchant Marine and Fisheries), NOAA recognizes individuals, state officials, local governments, volunteers, graduate students and environmentally conscious businesses.

### 'A MODEL FOR ALL': BAKER

The awards were formally announced by NOAA Administrator D. James Baker. "Giving these awards is our chance to thank the many people and organizations that dedicate so much time and put so much energy into improving our Nation's coasts," he said. "These are people whose ethic of environmental stewardship stands as a model for all. Because of their efforts, we can keep our promise to protect nature's legacy for generations to come."

Awards were given in ten categories: Coastal Steward of the Year, Local Government, Graduate Study, Excellence in Coastal Zone Management, Marine Sanctuary Management, Estuarine Reserve Management, Volunteer of the Year, Excellence in Promoting Cultural and Ethnic Diversity, Non-Governmental Organization (NGO) of the Year, and Business Leadership. The latter four categories were created this year to honor private-sector efforts promoting stewardship of the coasts.

NOAA also presented Sen. Ernest F. Hollings, D-S.C., chairman of the Senate Commerce, Science, and Transportation Committee, with a special award for his dedication and leadership in support of national coastal management efforts. For more than two decades, Hollings has led the battle to balance the protection and wise development of the Nation's shores.

### COASTAL STEWARD OF THE YEAR

**Beth Millman, Washington, D.C., Executive Director, Coast Alliance:** A true champion of the environment, Ms. Millman has mobilized nationwide grassroots activities to protect coastal resources, provided much-needed education materials for all sectors of society and has striven to resolve key coastal problems ranging from nonpoint source pollution to coastal development and flood insurance policies. Among other things, her work has helped contribute to the expansion of the Coastal Barrier Resources Act, a Federal law designed to protect undeveloped barrier islands from development.

### LOCAL GOVERNMENTS

**South Walton County Conservation and Development Trust Inc., Santa Rosa Beach, Fla.:** Rather than succumb to the pressure for increased tourism, South Walton County decided in 1992 to

designate 18,000 acres of newly acquired beachfront property for public use. Since then, the county has initiated a pilot conservation and development planning program that will promote protection of rare and endangered species and their habitats and create a network of greenways for use as wildlife corridors and recreational trails. The South Walton County Conservation and Development Trust, which was formed to govern these activities, has been working diligently to implement the program.

**City of Kenosha, Wis.:** The economic hard times of the last decade left many of the buildings along this city's waterfront abandoned and in ruins. In an effort to rebuild its faltering economy, the city initiated a waterfront revitalization program that transformed the area into a showcase for the city. Today, the area enjoys a new promenade, marina, boat repair stations, increased public parking and access points, gardens and other amenities that have successfully reintroduced the community to the coast. This project served as a model for others.

**Delaware County Conservation District, Pa.:** For 10 years, the Delaware County Conservation District has been a champion of environmental education. Using a local newspaper as its vehicle, the district publishes an environmental supplement known as the *Delco-Resourcer*, which brings environmental issues to the community's front door. This tool has been highly efficient and cost-effective in



NOAA Administrator D. James Baker and National Ocean Service head Stan Wilson present an award to Beth Millman, Executive Director, Coast Alliance as Coastal Steward of the Year.

educating some 50,000 residents about coastal environmental issues on a weekly basis.

## GRADUATE STUDENTS

**Kelie Cochran, University of Rhode Island:** In her studies at the University's Department of Marine Affairs, Cochran has targeted such important issues as nonpoint source pollution and public education. Her thesis tests whether public education on environmental issues actually results in changed human behavior and a "greener" environment.

**Miguel Jorge, University of Delaware:** Jorge has focused on both science and social science as they relate to coastal zone management. His thesis addresses an extremely complicated issue: the definition and implementation of "Integrated Coastal Management." While at Delaware, Jorge has held internships with the World Wildlife Fund where he worked on a wide range of projects, including the United Nation's Conference on the Sustainable Development of Small Island Developing States.

## VOLUNTEER OF THE YEAR

**Alison Fahrer, Islamorada, Fla.:** Since moving to the Florida Keys some 30 years ago, Fahrer has demonstrated a seemingly endless source of energy and dedication to saving the environment and preserving a healthy reef ecosystem. She has been appointed by three governors to Florida's Citizen's Advisory Committee on Coastal Resources Management, on which she currently serves, and has testified before the U.S. Congress and Florida State Legislature on the need to improve coastal management efforts. Closer to home, Fahrer serves on the Florida Keys National Marine Sanctuary Advisory Board, and is president of the Pennekamp Coral Reef Institute.

## NON-GOVERNMENTAL ORGANIZATIONS

**Center for Marine Conservation, Pollution Prevention Program, Washington, D.C.:** Over the past two years, the Center for Marine Conservation (CMC) initiated a worldwide campaign to coordinate and facilitate beach cleanups. This effort amassed a recruitment of more

than 200,000 volunteers from 34 U.S. states and island territories and 35 countries. These volunteers cleaned up more than five million pounds of debris along 6,000 miles of shoreline. As a result, CMC developed a vital database on marine debris. This program has had a lasting effect on both public awareness and political action.

## EXCELLENCE IN BUSINESS LEADERSHIP

**Edwards Boatyards, Falmouth, Mass.:** This marina, located within the boundaries of the Cape Cod National Seashore, has been built on standards to protect water quality while providing effective services to its customers. The marina has instituted a number of environmentally sensitive practices to better protect the marine environment. For example, it installed sediment traps into concrete floors to hold hazardous material spills and installed a faster and more efficient boat pump-out facility to deal with the problem of human sewage from boatheads. The marina owner, Charles Swain, also takes an active role in protecting the Cape's resources by serving on the Falmouth Planning Board and Waquoit Bay National Estuarine Research Reserve's Board of Directors.

## EXCELLENCE IN COASTAL ZONE MANAGEMENT

**Art Rocque, Assistant Commissioner, Long Island Sound Programs, State of Connecticut:** In his many years of service, Mr. Rocque has served as a leader of coastal management activities at both the state and national levels. In Connecticut he has spearheaded efforts to develop and implement a sound, comprehensive coastal management program involving local, state and Federal government parties. At the national level, Rocque has provided leadership in the Coastal States Organization (CSO), an organization of governors' representatives for ocean and coastal affairs, and has promoted intergovernmental coastal partnerships.

## EXCELLENCE IN PROMOTING CULTURAL AND ETHNIC DIVERSITY

**Michael Klubock, Malibu, Calif.:** Klubock was a sailor before dedicating

himself to educating young people in urban Los Angeles about the marine environment. He created the "Adopt-a-Beach Assembly Program" in 1991 and personally funded the establishment of the Malibu Foundation for Environmental Education. This program reaches multi-cultural communities, motivating students and directing them in hands-on activities in recycling, pollution prevention and beach cleanups. The program has reached over 35,000 Los Angeles County school-children in 88 schools; an additional 150 schools requested the program. Presently, the program is being translated into Spanish to make it a truly bilingual experience for teachers and students.

## EXCELLENCE IN ESTUARINE RESERVE MANAGEMENT

**Old Woman Creek National Estuarine Research Reserve, Ohio:** Located on the shores of Lake Erie, the Old Woman Creek estuarine research reserve has been a leader in developing innovative outreach programs and partnerships that further the goals of cooperative coastal resource management. The reserve's small staff has played a key role in assisting with the development of Ohio's coastal zone management program by fostering regional, National, and international cooperative programs. In addition, Old Woman Creek has been a catalyst in developing system-wide education and planning projects for the entire National Estuarine Research Reserve system.

## EXCELLENCE IN MARINE SANCTUARY MANAGEMENT

**Dr. Steven Gittings, manager, Flower Garden Banks National Marine Sanctuary:** As a manager of the sanctuary, Dr. Gittings has been an innovative leader, developing unique approaches to research, monitoring, education and outreach activities. He has fostered excellent working relationships with leaders of the oil industry and other Federal partners, especially the Department of the Interior's Minerals Management Service, and has been instrumental in securing innovative funding for research projects through the establishment of a Flower Gardens Fund. He also has built a solid volunteer force to support sanctuary resource protection. 

# Alabama Site is Big Step in Warning Network

**C**onstruction has begun on a new NOAA Weather Radio transmitter site in Fort Payne, Ala., marking a step towards achieving Vice President Al Gore's initiative of expanding NOAA Weather Radio coverage to minimize loss of life and property caused by natural disasters.

This pilot program will expand weather radio coverage into rural areas, providing early warning information for severe weather and other hazards.

"The expanded radio disaster warning system is part of this Administration's commitment to make sure that all Americans—rich and poor, urban and rural—have access to the benefits of the information revolution," said Vice President Gore. "It will significantly improve severe weather forecasting,

particularly in rural areas. It will help warn communities about hazardous weather so that they can protect themselves and their loved ones. Put simply, it will save lives."

## Information 'Before Disaster Strikes'

"NOAA Weather Radio gives people the kind of information they need to safeguard themselves and their homes before disaster strikes," said Elbert W. Friday Jr., director of NOAA's National Weather Service. "The Fort Payne



transmitter will enhance our efforts to protect citizens in a rural area not adequately covered by our present severe weather warning system."

The Fort Payne transmitter will bring expanded coverage to northeast Alabama, where Palm Sunday tornadoes last March killed 20 worshippers at the Goshen United Methodist Church near Piedmont. Although the NWS issued a tornado warning 12 minutes before touchdown, that information did not get to many in the affected area.

Following the tragedy, Vice President Gore announced a tri-agency initiative to expand the NOAA Weather Radio system and make receivers "as common as smoke detectors" in the home. The Commerce Department's NOAA, the Federal Emergency Management Agency (FEMA) and the Department of Agriculture's Rural Electrification Administration comprise the Federal partnership.

## Working Closely with FEMA

"FEMA is very pleased to be working so closely with NOAA as well as other federal and state agencies in developing a system for rapidly delivering critical emergency information," said James Lee Witt, FEMA director.

Completion of the Fort Payne site, which includes a transmitter and operations building, is scheduled for the first week of December.

In addition to Fort Payne, three new sites also are slated, with 10 existing sites to be upgraded.

"Our goal is to have the new Alabama sites and upgrades in place by the end of 1995," said Friday.



*The Whiting paid a visit to Savannah, Ga., last month, and held a widely attended open house.*

## Whiting Hosts Savannah Open House

The NOAA Ship *Whiting* opened her doors to the public at River Street in Savannah, Georgia last month. The *Whiting* shared this opportunity with both the Gray's Reef National Marine Sanctuary and the Ocean and Coastal Resources Management (OCRM) program. Over 500 people came aboard during the open house.

The *Whiting* is one of five NOAA ships engaged in updating the nautical charts along both U.S. coasts. She was sent to Savannah at the request of the Olympic Committee. "The 1996 Olympic yachting and sailing races will be held in Wassaw Sound. Our surveys will provide the groundwork for a commemorative Olympic nautical chart of the area, as well as vital information for updating current chart editions," explains Commander John D. Wilder, commanding officer of the *Whiting*. The ship's crew also surveyed the Wilmington River, which will be an essential waterway for the supplies and security that go along with the Olympics.

The *Whiting's* brow was opened at 10:00 am. By the time it was over, the open house had attracted 527 people, as well as two TV news crews and a local newspaper. Overall, it was a highly successful day and a good example of NOAA agencies working together.





# Antarctic Ozone Above Record Low Levels

**T**his year's low Antarctic ozone levels are slightly above last year's record low, probably due to the diminished effect of the eruption of Mt. Pinatubo in 1991, according to NOAA scientists at the South Pole.

As the cloud of dust that has been circling the Earth from the 1991 eruption of Mount Pinatubo dissipates, the amount of sulfuric acid particles around the Antarctic associated with it falls, according to researchers David Hofmann and Samuel Oltmans at NOAA's Climate Monitoring and Diagnostics Laboratory in Boulder, Colo.

This dust cloud has acted like the stratospheric ice clouds that hasten Antarctic ozone depletion by aiding the chemical conversion of chlorine molecules contained in chlorofluorocarbons into free chlorine molecules that destroy ozone.

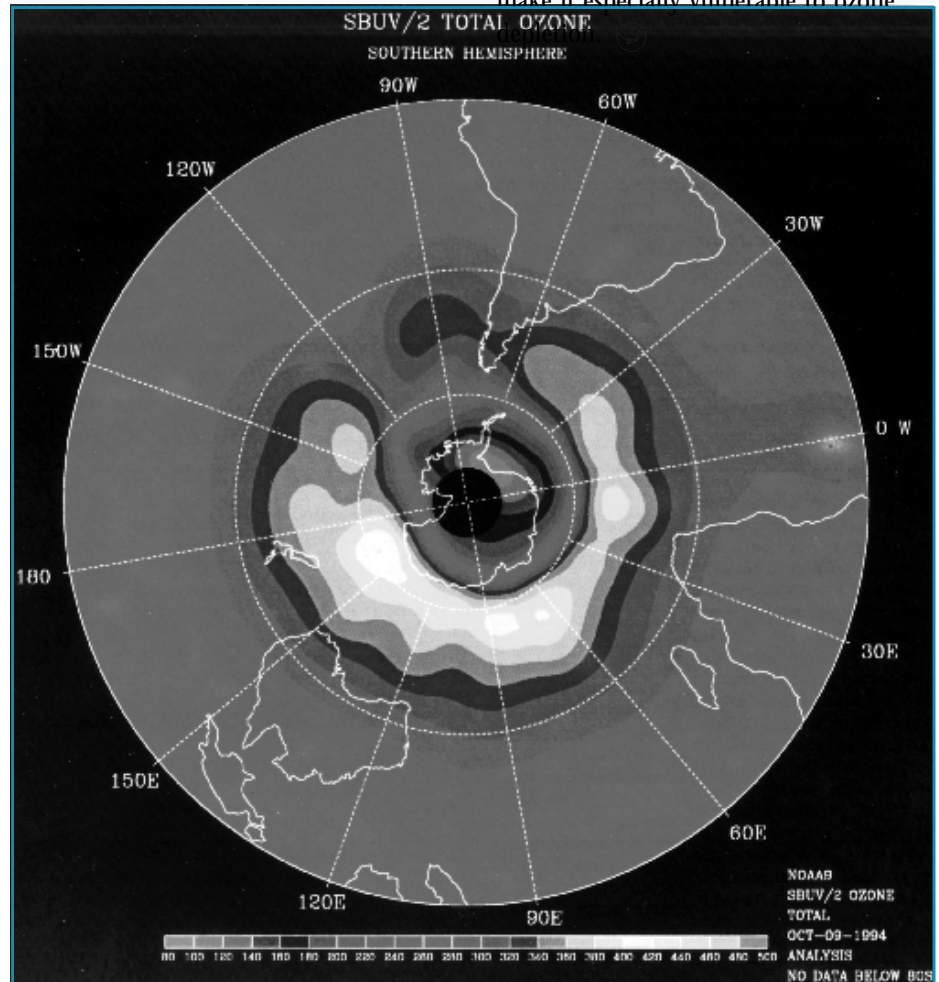
## 25 Percent Higher

Balloon measurements over the South Pole between Sept. 25 and Oct. 19 show that average ozone levels were 123 Dobson units, or about 25 percent higher than the record low of 98 for the same period last year, confirming recent NOAA satellite observations. A Dobson unit is a measure of the total number of ozone molecules directly overhead in the atmosphere. Typically, Antarctic ozone reaches its lowest level for the year in early October.

The layer of ozone in the atmosphere between 10 and 40 kilometers (6-25 miles) shields the Earth's surface from

the sun's harmful ultraviolet B rays.

Ozone has been declining over most of the globe for the past 15 years. But the decline has been most severe in Antarctica, where the weather and geography make it especially vulnerable to ozone



The light-gray area to the upper right of the South Pole (the black circle in the middle of the figure) is the area of the least ozone. This light-gray area, and the rings of darker gray immediately around it, make up the so-called "ozone hole." The data for the figure was gathered by NOAA-9, a polar-orbiting satellite, on October 9.

## Institute to Focus on Arctic Research

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council of fellows, research fellows of the institute and a visiting fellows program for scientists from other universities. Gunter E. Weller, a professor of geophysics at the University of Alaska at Fairbanks, is the Institute's first director.

The Cooperative Institute for Arctic Research will join seven other similar cooperative institutes already working with NOAA. ☺

## Swordfish is Weapon Against Hunger

Swordfish, a food popular with gourmet diners, will now be fed to the needy under a NOAA-managed pilot program.

The program will allow a small number of selected commercial long-line fishermen in the Gulf of Mexico and Atlantic to keep more undersize swordfish than they could otherwise legally retain, and to donate them to specified dealers. The dealers, in turn, will give the fish to the Chicago-based Second Harvest food bank network for distribution to the needy. Second Harvest has been involved with food distribution programs nationwide since 1979.

Until now, fishermen had to throw back all undersize swordfish, those under 41 pounds, except for a "trip allowance" limited to 15 percent of the total number of swordfish caught on one trip.

Scientists with NOAA's National Marine Fisheries Service say the program will also provide valuable biological and statistical information on undersize swordfish. ☺

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and has agreed to have its 17-fishing-vessel fleet tracked by satellite for five years—the first such condition required in a settlement on illegal fishing. The settlement directs the company to install satellite transponders on its 17 fishing vessels by the fall of 1995.

"We've never before had the ability to track the movement of known poachers in foreign fleets so easily, and this satellite tracking may act as a deterrent for other foreign fishing vessels contemplating pillaging U.S. waters," said Rollie Schmitt, assistant administrator for the fisheries service. "This may become a model for future cases concerning illegal foreign fishing."

**Contracts Awarded for Weather Balloon Instruments:** NOAA has awarded contracts valued at up to \$4 million to two companies to provide radiosonde instruments for weather balloons. VIZ Manufac-

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turing Company, Philadelphia, and Vaisala Inc., Woburn, Mass., were awarded the one-year contracts, which include an option for an additional year.

**Satellite Saves Mariners:** Four sailors who jumped ship when their fishing vessel caught fire were saved recently when NOAA's search and rescue system went into action after picking up their signal.

The sailors rescued were from the *Alentejo*, which became engulfed in flames 60 nautical miles from Nantucket, Mass., after a fire started in the engine room. The fire spread so rapidly that the crew was unable to make a radio call. They jumped into a life raft and activated a 406 MHz Emergency Position Indicating Radio Beacon (EPIRB). Its signal was picked up by the COSPAS-SARSAT search and rescue system and relayed to the Coast Guard. A nearby Coast Guard helicopter spotted a life raft two miles away with the four crewmen and the EPIRB on board. The helicopter hoisted the sailors and transported them to Cape Cod Hospital for treatment of mild hypothermia. 

# New 1-900 Access to Ocean Data Debuts

**Sailors, fishermen, students, scientists and mariners will now be able to receive a wide range of oceanographic information and charts through NOAA's new automated fax service.**

With NOAA's 24-hour-a-day fax chart service—1-900-288-CHART—you can receive 15 different analysis charts, such as sea surface temperatures and surface current speed and direction. The calls will cost \$1.50 per minute, with charts taking two to four minutes to transmit.

NOAA's Ocean Products Center has established the new service as part of the Administration's goal to make NOAA's information and analyses more easily available to everyone. With this new system, NOAA analyses will be available at both high and low resolution for various regions of the coastal U.S. and the Atlantic and Pacific ocean areas. High-resolution products cover small

regional areas like the Northeast U.S., while low-resolution products cover large geographical areas, such as the North Atlantic Ocean.

The Ocean Products Center will also provide technical assistance in interpreting any of the fax charts. A call to 900-288-HELP (\$3.00 per minute) between 2:30 p.m. and 4:30 p.m. (EST), Monday-Friday, will reach a staff oceanographer. Although every effort will be made to guarantee the availability of products and technical assistance, the Center cannot guarantee that all charts will be available at all times, or that staff oceanographers will be able to answer all questions.

To dial into the system, you must have a fax machine with a telephone handset. This setup allows requested charts to be sent immediately. The Center can also provide instructions to let users with computer fax modems retrieve charts. After calling the 900 number, callers will be given basic information about the service and then asked to enter a password if products are desired. The public password is 1111, followed by #.

In addition to the oceanographic charts, information about the fax system and services is also available, including a complete 17-page package containing detailed instructions, product descriptions and samples. Users can also obtain this package free of charge by mail by writing: NOAA Ocean Products Center, Room 100, 5200 Auth Road, Camp Springs, MD 21046. **NOAA Report is a NOAA publication for BAA.**

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lasted much longer."

Schnell and Hansen are excited by the possibilities for continued cooperation with the Cherskiy aviators whereby NOAA scientists can directly and safely conduct their scientific studies in the Arctic.

"The British rescue serves to point out how important the Cherskiy base is to the safety of scientists venturing into the Arctic," Schnell said. "But most importantly, access to the base has allowed us to do studies that would have otherwise been impossible. We actually installed our own research equipment aboard the Russian aircraft in 1992. It is vitally important that we be able to continue this level of cooperation."

—*Jeanne Kouhestani* 

*For further information, contact Dr. Russell C. Schnell, director, Mauna Loa Observatory, (808) 961-3788.*